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EXAMINER	
WHIPPLE, BRIAN P	
ART UNIT	**PAPER NUMBER**
2196	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/18/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	**Application No.** 10/682,601	**Applicant(s)** CLUBB ET AL.
	Examiner Brian P. Whipple	**Art Unit** 2196

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 October 2003*.
2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-22* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a)☐ All b)☐ Some * c)☐ None of:
1.☐ Certified copies of the priority documents have been received.
2.☐ Certified copies of the priority documents have been received in Application No. _____.
3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date *10/27/2004*.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-22 are pending in this application and presented for examination.

Claim Objections

2. Claims 4, 13-15, and 19-20 are objected to for lack of antecedent basis:

   a. "said database", claim 4, line 9;

   b. "said remaining physical servers", claim 13, line 4; claim 14, lines 2-3; claim 15; lines 2-3.

   c. "said entity", claim 19, line 1; claim 20, line 1.

   Appropriate correction is required.

3. Claim 19 depends from claim 17, but further defines material introduced in independent claim 18. It may have been intended for claim 19 to depend from claim 18.

4. Claim 20 depends from claim 17, but further defines material introduced in independent claim 18. It may have been intended for claim 20 to depend from claim 18.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-16 and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. As to claim 1, lines 13 and 16-17, it is unclear whether to treat "(corresponding logical node)" and "(corresponding physical node)" as a positive recitation of structure, or merely a generic description. For clarity, these limitations are not given any patentable weight for this Office Action.

8. As to claim 4, the meaning of "said database" is unclear. A database could refer to the standard concept of a database in computer science as something separate from the logical datastore or it could refer to the logical datastore. The examiner interpreted the database as being the logical datastore.

9. As to claim 5, line 5, it is unclear whether to treat "(pre-existing physical datastore)" as a positive recitation of structure, or merely a generic description. For clarity, these limitations are not given any patentable weight for this Office Action.

10. As to claim 15, the meaning of "as much as possible" is unclear. As much as possible could refer to a wide range from equal distribution of load to a high variance in distribution. The examiner interpreted "as much as possible" as any distribution of load across a plurality of servers.

11. As to claim 22, lines 7 and 9, it is unclear whether to treat "(selected logical server)" and "(associated physical server)" as a positive recitation of structure, or merely a generic description. For clarity, these limitations are not given any patentable weight for this Office Action.

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. Claims 1-18 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Factor, U.S. Patent No. 6,272,523 B1.

14. As to claim 1, Factor discloses a distributed computer system comprising:

a. at least one physical node (Figure 1, item 20; Column 5, lines 20-21);

b. at least one logical node (Figure 4, item 56; Column 6, lines 35-47);

wherein each of one or more of said at least one logical node may be mapped to one of said at least one physical node (Abstract, lines 3-6);

said system comprises computer executable instructions for performing a method comprising the steps of: receiving a request for work (Figure 2, items 24 and 26; Column 5, lines 49-50);

examining said request for work (Column 5, lines 51-55);

determining which of said at least one logical node corresponds with said request (corresponding logical node) (Column 5, lines 44-48);

determining which of said at least one physical node said corresponding logical node is associated with (corresponding physical node) (Column 5, lines 51-55);

interacting with said corresponding logical node (Column 5, lines 44-48).

15. As to claim 17, Factor discloses a computerized system comprising a computer readable medium having computer executable instructions for transacting requests (Column 4, lines 10-15)

over a network comprising at least one physical server (Column 5, lines 20-21)

wherein said physical server is subdivided into a plurality of logical servers (Column 3, lines 66-67)

wherein each of said plurality of logical servers is associated with a group of consumer identifiers (Column 3, lines 59-65)

and wherein said computer executable instructions are configured to route a request, further comprising a consumer identifier, to a logical server whose range of consumer identifiers include said consumer identifier associated with said request (Column 5, lines 44-57; Column 6, lines 12-17).

16. As to claim 18, Factor discloses a computerized system comprising a computer readable medium having computer executable instructions for transacting requests (Column 4, lines 10-15)

over a network comprising at least one physical server (Column 5, lines 20-21)

wherein said physical server is subdivided into a plurality of logical servers (Column 3, lines 66-67)

wherein each of said plurality of logical servers may be associated with at least one entity (Column 3, lines 59-65)

and wherein said computer executable instructions are configured to route a request, wherein said request is also associated with a particular entity, to a logical server whose range of entities includes said entity associated with said request (Column 5, lines 44-57; Column 6, lines 12-17).

17. As to claim 22, Factor discloses a method for distributing a workload, which utilizes a plurality of physical and logical servers, comprising the steps of:

receiving a request for work at a processing node (Figure 2, items 24 and 26; Column 5, lines 49-50);

examining said request for an identifier (Column 5, lines 49-55);

determining a logical server out of said plurality of logical servers which has been configured to accept requests associated with said identifier (selected logical server) (Column 5, lines 44-51; Column 6, lines 12-17);

determining a physical server associated with said selected logical server (associated physical server) (Column 5, lines 51-55);

routing said request to said associated physical server (Column 5, lines 51-55);

monitoring said plurality of physical servers for said workload to exceed a predetermined maximum on any of said plurality of physical servers (Column 3, lines 33-36; Column 4, lines 46-49);

redistributing a mapping of said logical servers to said physical servers to achieve a workload balanced according to a predetermined formula (Abstract, lines 6-9; Column 3, lines 33-36; Column 4, lines 46-49; Column 5, lines 63-67; Column 6, lines 1-3 and 12-17).

18. As to claim 2, Factor discloses a. at least one of said at least one corresponding physical node comprises a corresponding physical datastore (Figure 1, item 20; Column 5, lines 20-21);

b. at least one of said at least one corresponding logical node comprises a corresponding logical datastore (Figure 4, item 56; Column 5, lines 44-50; Column 6, lines 12-14, 27-28, and 35-47).

19. As to claim 3, Factor discloses at least one corresponding physical node comprises a corresponding physical server (Figure 1, item 20; Column 5, lines 20-21);

at least one corresponding logical node comprises a corresponding logical server (Figure 4, item 56; Column 6, lines 12-14, 27-28, and 35-47).

20. As to claim 4, Factor discloses said corresponding logical datastore may be associated with a first predetermined set of data values (Column 6, lines 12-17; logical processes is a first set of data values);

said corresponding logical server may be associated with a second predetermined set of data values (Column 6, lines 12-17; physical processes is a second set of data values);

said step of interacting comprises: opening said corresponding logical datastore (Column 5, lines 44-50);

obtaining a set of additional information about said request from said database (Column 5, lines 51-55; Column 6, lines 53-57);

determining which of said at least one corresponding physical server and corresponding logical server is associated with a combination of said request and said set of additional information (Column 5, lines 51-55);

routing said request to said corresponding logical server (Column 5, lines 44-50);

allowing said corresponding logical server to access and modify said corresponding logical datastore (Column 6, lines 22-32);

processing said request on said corresponding logical datastore (Column 6, lines 22-32).

21. As to claims 5 and 12, Factor discloses said system further comprises computer executable instructions for upgrading said system by performing the steps of:

recognizing at least one additional physical datastore in said system wherein said additional physical datastore is different from said corresponding physical datastore (pre-existing physical datastore) (Abstract, lines 6-9; Column 5, lines 63-67; Column 6, lines 1-3; it is inherent that if servers can be dynamically added that their addition is recognizable);

migrating at least one logical datastore of said set of logical datastores from said pre-existing physical datastore to said additional datastore (Abstract, lines 3-9; it is inherent that if the mapping between logical processes and physical processes is dynamically updated based on the addition of a server that logical migration occurs);

remapping said logical datastore from said pre-existing physical datastore to said additional datastore (Abstract, lines 6-9).

22. As to claim 6, Factor discloses at least one of said at least one corresponding physical node comprises a corresponding physical server (Figure 1, item 20; Column 5, lines 20-21);

at least one of said at least one corresponding logical node comprises a corresponding logical server (Figure 4, item 56; Column 6, lines 12-14, 27-28, and 35-47);

said interacting step comprises routing said request to said corresponding logical server (Column 5, lines 44-50).

23. As to claim 7, Factor discloses said system further comprises computer executable instructions for performing the steps of:

a. monitoring a workload allocated to each of said at least one physical server (Column 3, lines 33-36; Column 4, lines 46-49);

b. if said workload, on any of said at least one physical servers, exceeds a predetermined maximum (Column 3, lines 33-36; Column 4, lines 46-49; it is inherent that if dynamic reallocation of work occurs due to too many requests that there is a predetermined maximum):

adding at least one additional physical server to said system (Abstract, lines 6-9; Column 3, lines 33-36; Column 4, lines 46-49; Column 5, lines 63-67; Column 6, lines 1-3);

remapping at least one of said logical servers across said at least one physical server including said additional physical server so as to redistribute said workload according to a predefined formula (Abstract, lines 6-9; Column 3, lines 33-36; Column 4, lines 46-49; Column 5, lines 63-67; Column 6, lines 1-3 and 12-17).

24. As to claim 8, Factor discloses said system further comprises an application programming interface configured to allow a user to

monitor a workload allocated to each of said at least one physical server (Column 3, lines 33-36; Column 5, lines 55-57);

recognizing at least one additional physical server (Abstract, lines 6-9; Column 5, lines 63-67; Column 6, lines 1-3);

remapping said at least one logical server across said at least one physical server including said additional physical server so as to redistribute said workload (Abstract, lines 6-9; Column 3, lines 33-36; Column 4, lines 46-49; Column 5, lines 63-67; Column 6, lines 1-3 and 12-17).

25. As to claim 9, Factor discloses said system comprises at least two physical servers and further comprises computer executable instructions for performing the steps of:

monitoring a workload allocated to each of said corresponding physical servers (Column 3, lines 33-36; Column 5, lines 55-57);

if said workload, on any of said physical servers, exceeds a predetermined maximum (Column 3, lines 33-36; Column 4, lines 46-49; it is inherent that if dynamic reallocation of work occurs due to too many requests that there is a predetermined maximum),

remapping at least one said logical servers so as to redistribute said workload according to a predefined formula (Abstract, lines 6-9; Column 3, lines 33-36; Column 4, lines 46-49; Column 5, lines 63-67; Column 6, lines 1-3 and 12-17).

26. As to claim 10, Factor discloses said system comprises at least two physical servers and further comprises computer executable instructions for performing the steps of:

monitoring a workload allocated to each of said corresponding physical servers (Column 3, lines 33-36; Column 5, lines 55-57);

if said workload, on any of said physical servers, individually or in combination, falls below a predetermined minimum (Column 3, lines 37-39; it is inherent that if dynamic reallocation of work occurs due to too few requests that there is a predetermined minimum),

remapping at least one of said logical servers so as to redistribute said workload according to a predefined formula (Abstract, lines 6-9; Column 3, lines 33-36; Column 4, lines 46-49; Column 5, lines 63-67; Column 6, lines 1-3 and 12-17).

27. As to claim 11, Factor discloses

a. said request comprises a data value (Figure 2, items 24 and 26; Column 5, lines 22-24 and 49-50);

b. said at least one corresponding logical server is associated with a predetermined group of data values (Column 6, lines 12-17);

c. said system comprises further computer executable instructions for performing the steps of: obtaining said data value from said request (Column 5, lines 44-57);

matching said data value associated with said request with one of said at least one corresponding logical server wherein said corresponding logical server is associated with said predetermined group of data values which includes said request's data value (Column 5, lines 44-57; Column 6, lines 12-17).

28. As to claim 13, Factor discloses said system comprises further computer executable instructions for performing the step of:

a. if one of said physical servers fails, remapping said corresponding logical servers across said remaining physical servers according to a predetermined formula (Abstract, lines 6-9; Column 3, lines 33-36; Column 4, lines 46-49; Column 5, lines 35-39 and 63-67; Column 6, lines 1-3 and 12-17; it is inherent that if servers can be removed and dynamic remapping occurs that the dynamic remapping can occur following server failure).

29. As to claim 14, Factor discloses said predetermined formula comprises distributing said logical servers on a pro-rata basis across said remaining physical servers (Column 3, lines 33-36; Column 4, lines 46-49; Column 5, lines 55-57).

30. As to claim 15, Factor discloses said predetermined formula comprises analyzing a pre-existing workload and capacity on each of said remaining physical servers and distributing said logical servers in such a manner as to balance, as much as possible, said workload across said remaining physical servers (Column 3, lines 33-36; Column 4, lines 46-49; Column 5, lines 55-57).

31. As to claim 16, Factor discloses a) said request comprises at least one consumer identifier (Column 4, lines 11-15);

b) said at least one logical server is programmed to process a plurality of requests corresponding to a plurality of consumer identifiers (Column 3, lines 59-67; Column 4, lines 11-15);

c) said determining step is based on matching a request with a specific consumer identifier to its corresponding logical server (Column 3, lines 59-67; Column 4, lines 11-15).

Claim Rejections - 35 USC § 103

32. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

33. Claims 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Factor, in view of Sheth et al. (Sheth), U.S. Publication No. 2002/0194502 A1.

34. As to claim 19, Factor does not disclose said entity comprises a family.

However, Sheth does disclose said entity comprises a family ([0127], lines 1-5).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Factor by associating an entity with a family as taught by Sheth in order to associate a family with certain shared information ([0127], lines 5-7).

35. As to claim 20, Factor does not disclose said entity comprises a set of employees from a company.

However, Sheth does disclose said entity comprises a set of employees ([0127], lines 1-5).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Factor by associating an entity with a set of employees as taught by Sheth in order to associate a set of employees with certain shared information ([0127], lines 5-7).

36. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Factor and Sheth as applied to claim 20 above, in view of Nag, U.S. Publication No. 2004/0172464 A1.

37. As to claim 21, Factor and Sheth disclose said second entity may be allocated to a different logical server (Factor, Abstract, lines 3-6).

Factor and Sheth do not disclose a second set of employees from said company may be associated with a second entity.

However, Nag does disclose a second set of employees from said company may be associated with a second entity (Page 13, right column, lines 44-47).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Factor and Sheth by associating a second set of employees from a company with a second entity as taught by Nag in order to specify quality of service based upon user communities (Nag, Abstract, lines 3-11).

Summary

38. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian P. Whipple whose telephone number is (571)270-1244. The examiner can normally be reached on Mon-Thu (7:30 to 5), Fri (7:30 to 4 or day off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nabil El-Hady can be reached on (571)272-3963. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BPW

Brian P. Whipple

N ElHady

NABIL M. EL-HADY
SUPERVISORY PATENT EXAMINER